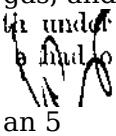
grammes per 1 kilogramme C, or, since from 1 kilogramme C 5 cubic metres gas is produced, amount to -10 grammes per cubic metre.

Dr. Ing. Cararis(" StahlundEisen," 1908,p. 588) has adopted the view that the steam content of the gas should not exceed 30 grammes per cubic metre, and that in the economical working of an open-hearth plant a continual steam content of over 60 grammes per cubic metre should in general bo excluded. He found in <ms producers with water seals, in
ing Westphalm/n coals, that it wan
50 to (JO grammes ftou (50 to ovor 100
working slagging and impossible to produce ygas wi of steam per cubic ingflre, and h< grammes.

The question of rfie injurious IiMMenco of steam on the working of the furnace is as y«t lijtMe cleared, up, and it will be further revertyft to afterwarllij. 1 Nevertheless, the above-given specification appears tCHn severe, since a ^an which contains less tlJm 80 graimiu^^por cubic metro might only admit of boin/ pn)duwjclNir\n«i{ cooled down the*, gas, and separated the/steam by S^VijiH of condensation. Thor



an 5
now, howove/ waanyNPpon-ho^'th works working with which are nmnufactun^Lfixjni coals with high water and oven w|(;h wood and yoat, without cooling of the gas and condensation of tho steam, and working often by no means badly. I XM> however, it is at all times an undesirable substance forS^Kmaeo working, and onovshould employ all moans to avoid air&xcoHHi thereof. Now, however, tho air blast, forms a cloaiT^sj>or<ieptiblo source for an increased steam content of the gas, if too much steam bo added to the name. The steam lowers thus the reaction temperature, and an han been established from the numerouH researches of Harries, and from the measurements of Quasobart (u Moiallurglo/' 1908, pp. 224 ct ,svv/.) and .'Pro&jsflor Mayor of Aachen (Htahl und Eisoti, 1908, p. 725), and others, it' follows that 50 per cent, or more of the amount of steam employed in able to pass undecomposed through the producer and #<> over into the gas. Further, this steam can be the indirect cause of tho Marsh gas being burnt, an is shown in tho chapter on "Judgment of Producer Gas from the Analysis/* whereby